09960 2795950

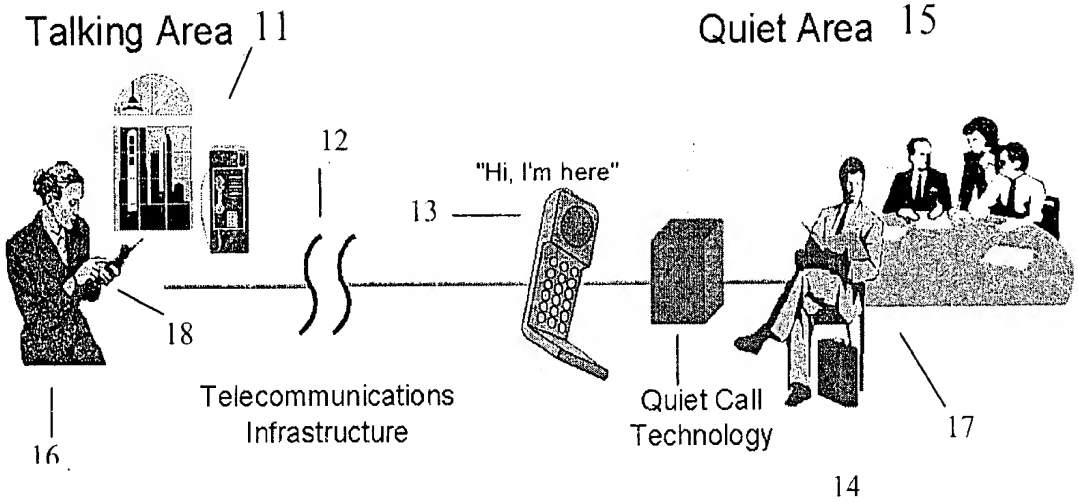


Fig. 1

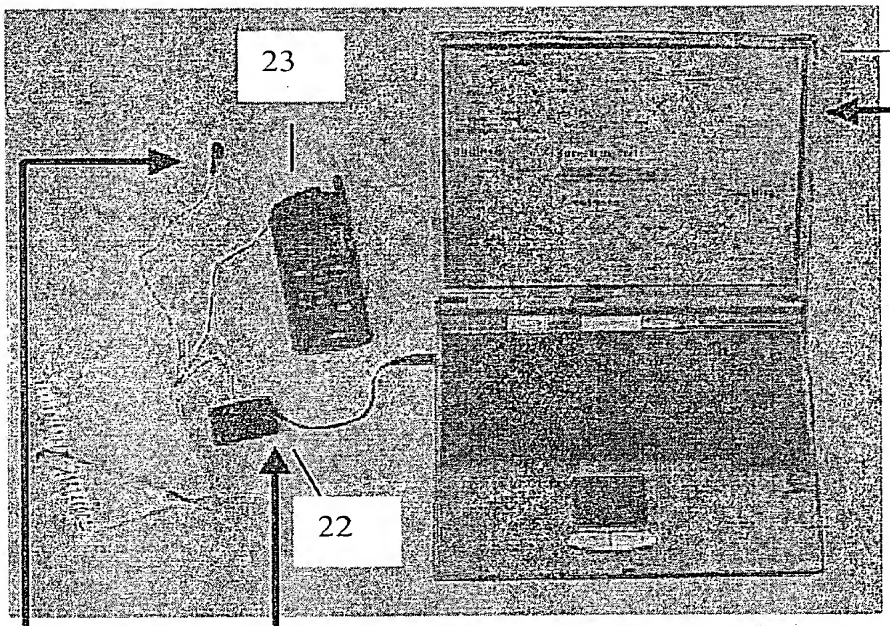

20
21
23
22
On Win 95/98/NT PC:
Conversation Representation
• Powerpoint Slide Show
Utterance Data Store
• Powerpoint
Audio Generator
• PC Sound Card
Upload/Download
• Powerpoint file transfer
Audio Output
(switchable between PC speaker jack and speaker)
Phone to User Connection
Audio Input (disabled)
• Qualcomm pdQ Smartphone Hands-Free Headset (modified to disable microphone)
Audio to Phone Connector
• Impedance Matching Circuit

Fig.2

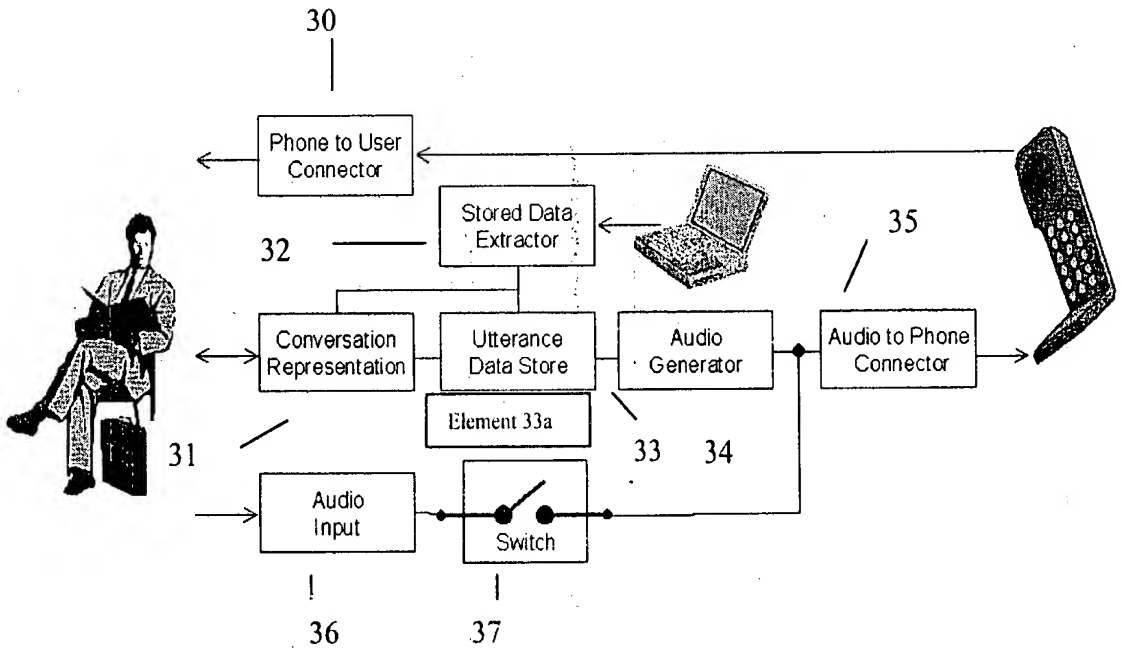

30
Phone to User Connector
Stored Data Extractor
32
35
Conversation Representation
Utterance Data Store
Audio Generator
Audio to Phone Connector
Element 33a
31
33
34
Audio Input
Switch
36
37

Fig. 3

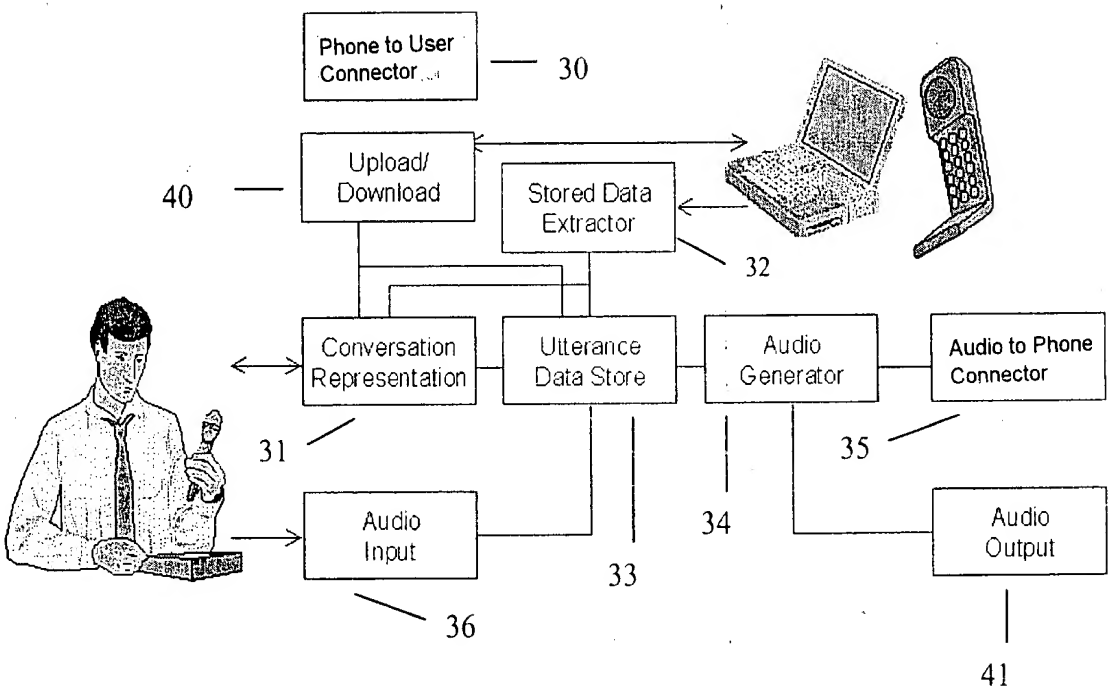

Phone to User Connector
30
Upload/ Download
40
Stored Data Extractor
32
Conversation Representation
Utterance Data Store
Audio Generator
Audio to Phone Connector
31
35
Audio Input
34
Audio Output
33
36
41

Fig. 4

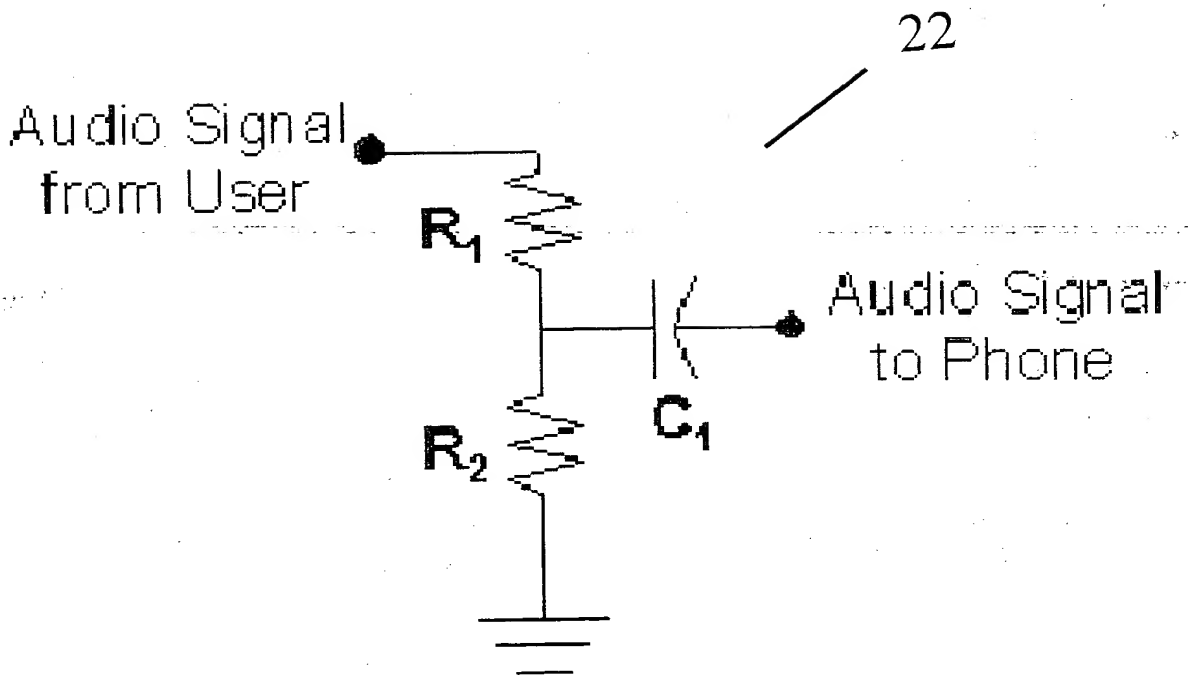


Fig. 5

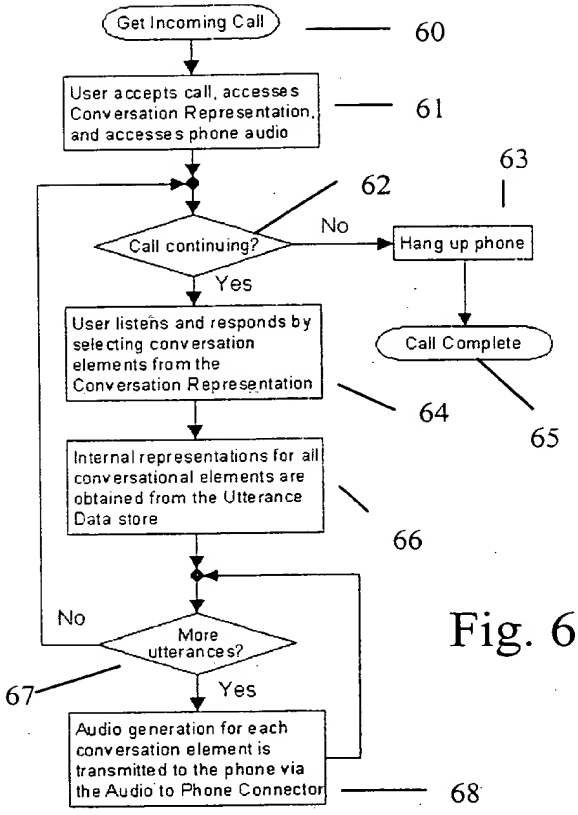

Get Incoming Call
60
User accepts call, accesses Conversation Representation, and accesses phone audio
61
63
62
Call continuing?
No
Hang up phone
Yes
User listens and responds by selecting conversation elements from the Conversation Representation
Call Complete
64
65
Internal representations for all conversational elements are obtained from the Utterance Data store
66
No
More utterances?
67
Yes
Audio generation for each conversation element is transmitted to the phone via the Audio to Phone Connector
68

Fig. 6

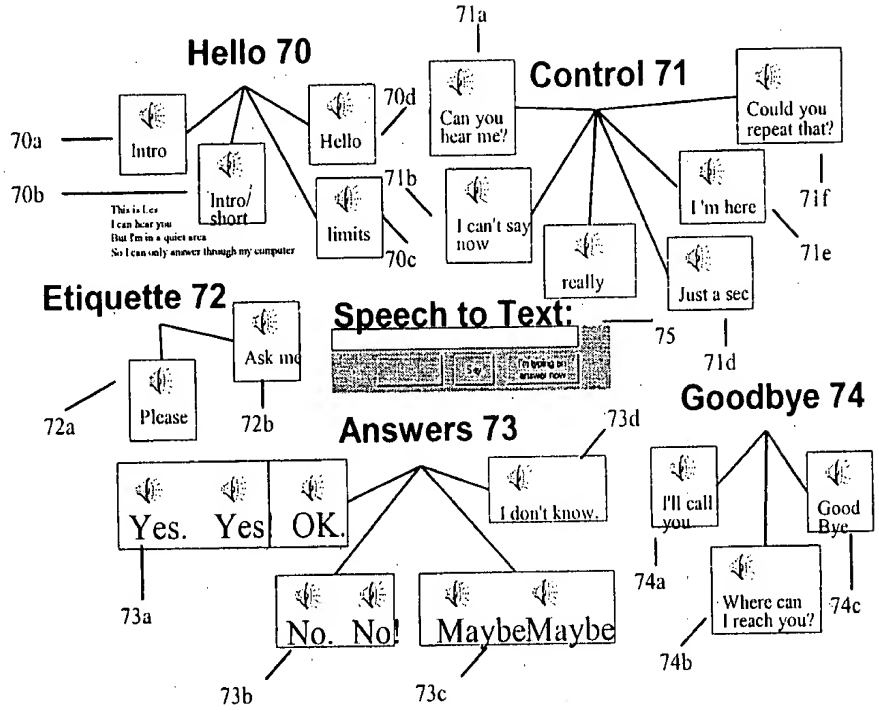
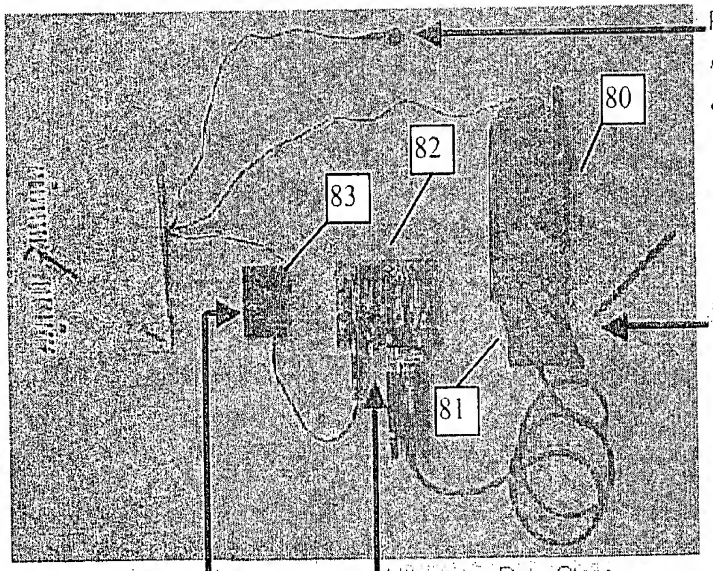

Hello 70
Control 71
Etiquette 72
Speech to Text:
Answers 73
Goodbye 74
Intro
Intro/ short
Hello
limits
Can you hear me?
I can't say now
really
Just a sec
I'm here
Could you repeat that?
Please
Ask me
Yes.
Yes
OK.
No.
No!
I don't know.
MaybeMaybe
I'll call you
Where can I reach you?
Good Bye
70a
70b
70c
70d
71a
71b
71d
71e
71f
72a
72b
73a
73b
73c
73d
74a
74b
74c
75

Fig. 7



Phone to User Connection

Audio Input (disabled)

- Qualcomm pdQ Smartphone Hands-Free Headset (modified to disable microphone)

Conversation Representation

- Qualcomm pdQ Smartphone with modified Palm interface

Upload/Download

- QVPro Software
- Palm HotSync

Audio to Phone Connector

- Impedance Matching Circuit

Utterance Data Store

Audio Generator

Audio Output

- Quadravox QV305 RS232 Playback Controller

Fig. 8

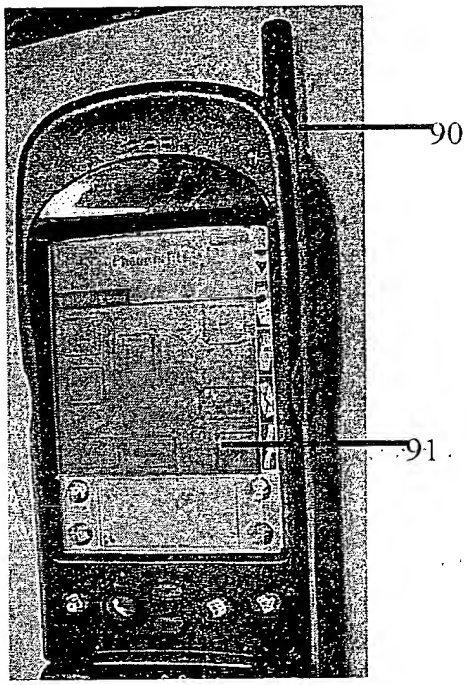


Fig. 9

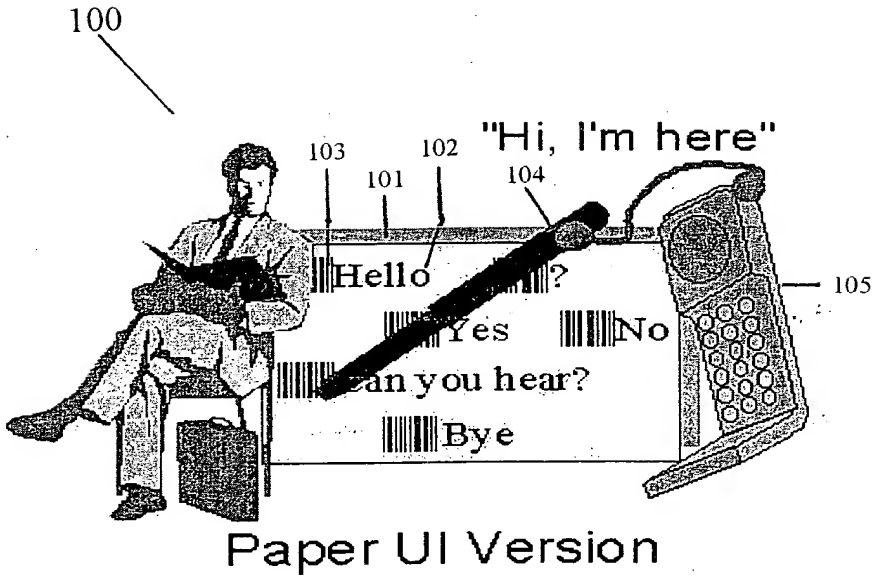

100
"Hi, I'm here"
103
101
102
104
Hello
?
Yes
No
an you hear?
Bye
105
Paper UI Version

Fig. 10

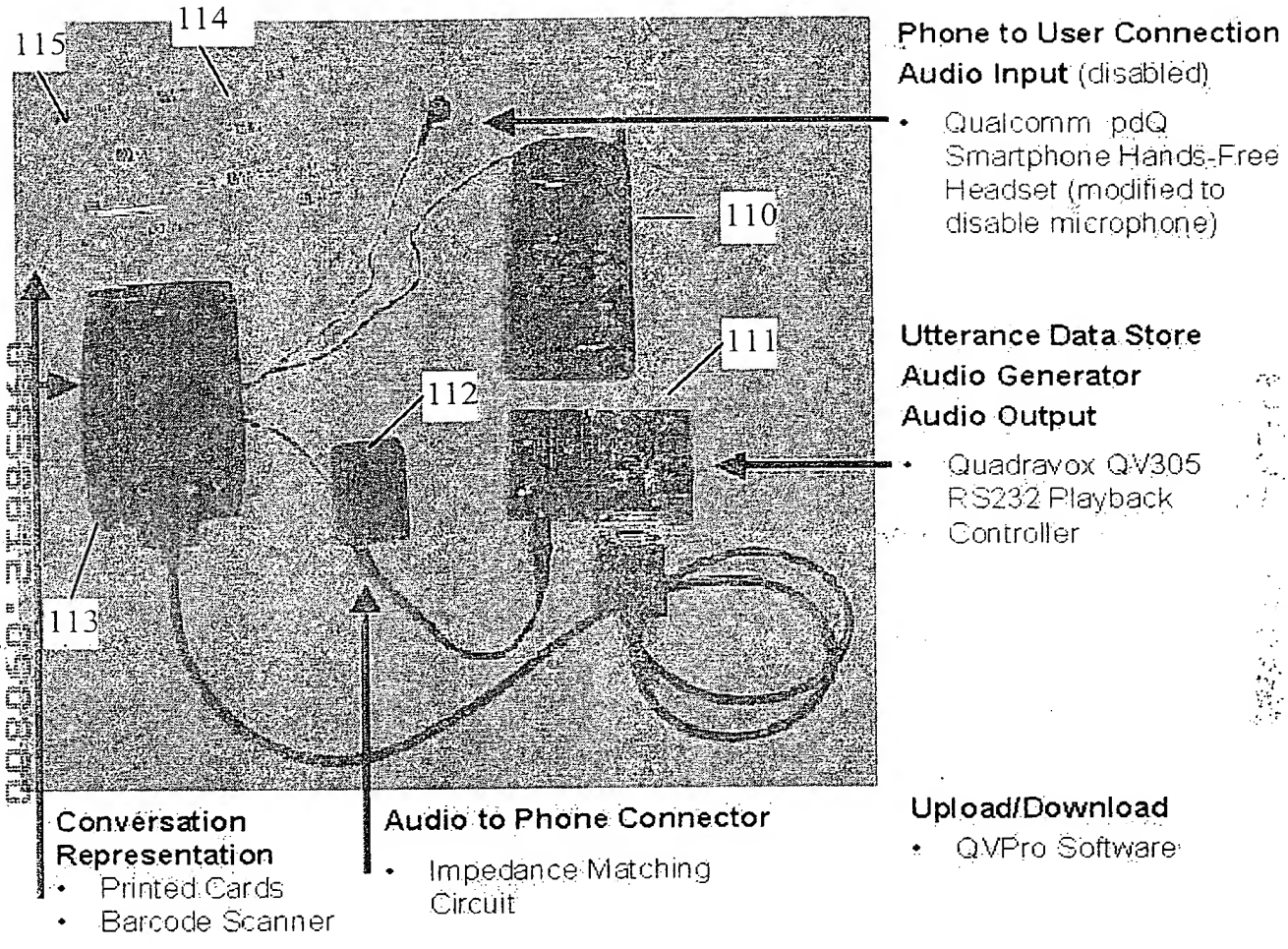

114
115
110
111
112
113
Phone to User Connection
Audio Input (disabled)
• Qualcomm pdQ Smartphone Hands-Free Headset (modified to disable microphone)
Utterance Data Store
Audio Generator
Audio Output
• Quadravox QV305 RS232 Playback Controller
Conversation Representation
• Printed Cards
• Barcode Scanner
Audio to Phone Connector
• Impedance Matching Circuit
Upload/Download
• QVPro Software

Fig. 11

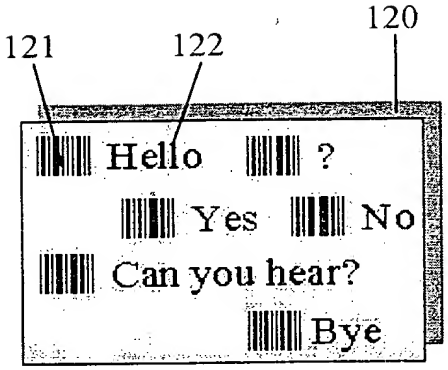


Fig. 12

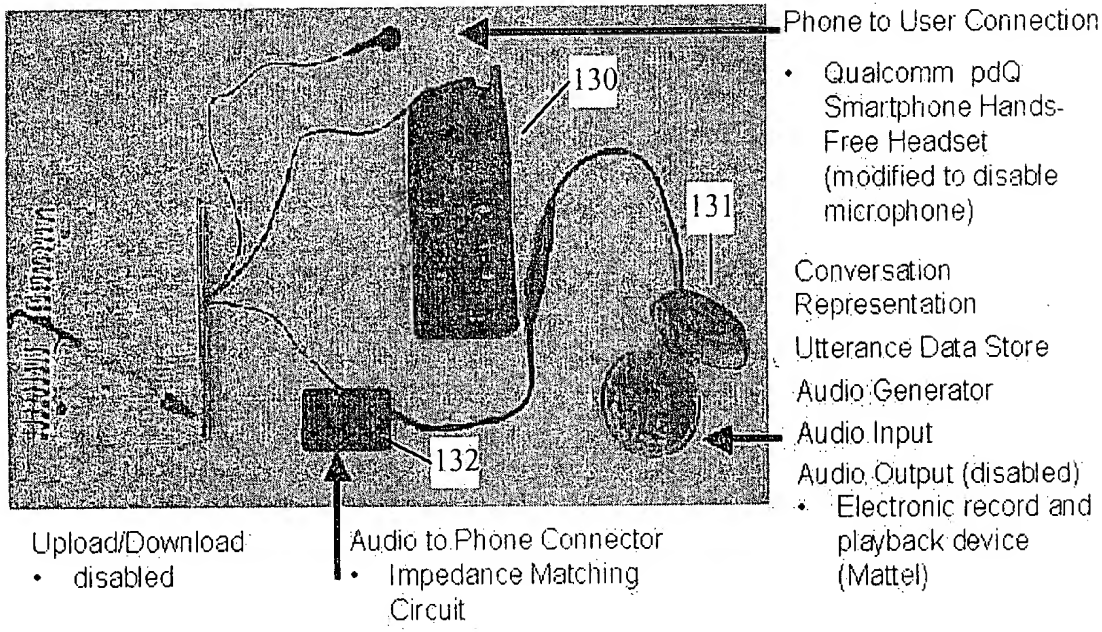

Phone to User Connection
• Qualcomm pdQ Smartphone Hands-Free Headset (modified to disable microphone)
130
131
Conversation Representation
Utterance Data Store
Audio Generator
Audio Input
Audio Output (disabled)
• Electronic record and playback device (Mattel)
132
Upload/Download
• disabled
Audio to Phone Connector
• Impedance Matching Circuit

Fig. 13

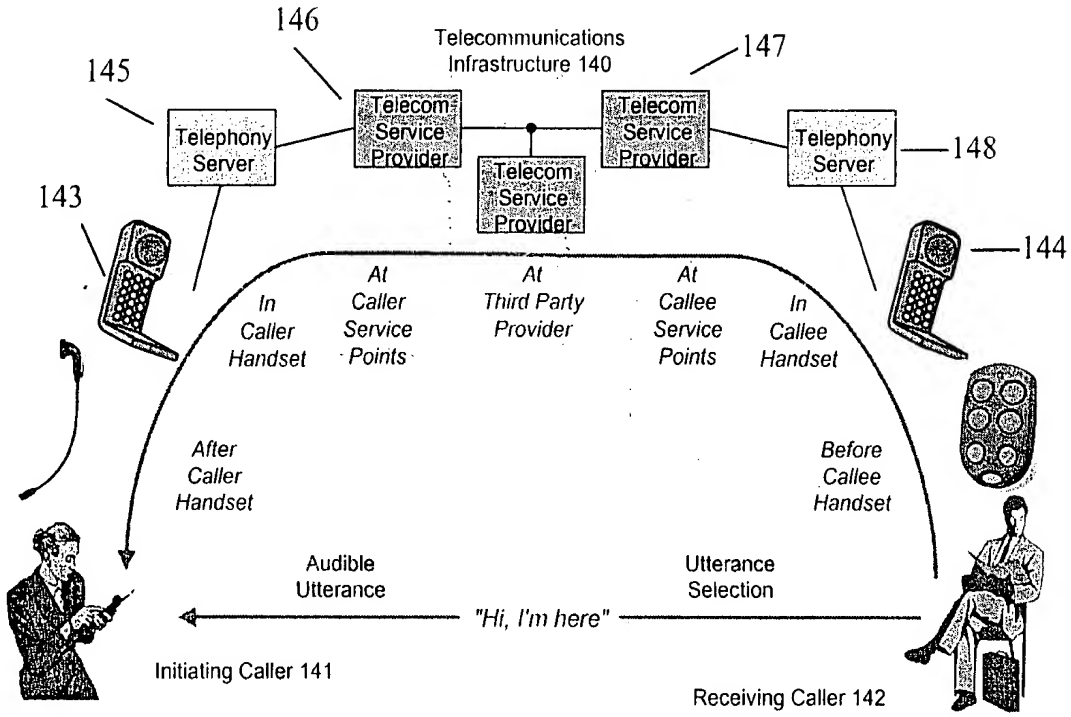

146
Telecommunications
Infrastructure 140
147
145
Telephony
Server
Telecom
Service
Provider
Telecom
Service
Provider
Telecom
Service
Provider
Telephony
Server
148
143
144
In
Caller
Handset
At
Caller
Service
Points
At
Third Party
Provider
At
Callee
Service
Points
In
Callee
Handset
After
Caller
Handset
Before
Callee
Handset
Audible
Utterance
Utterance
Selection
"Hi, I'm here"
Initiating Caller 141
Receiving Caller 142

Fig. 14

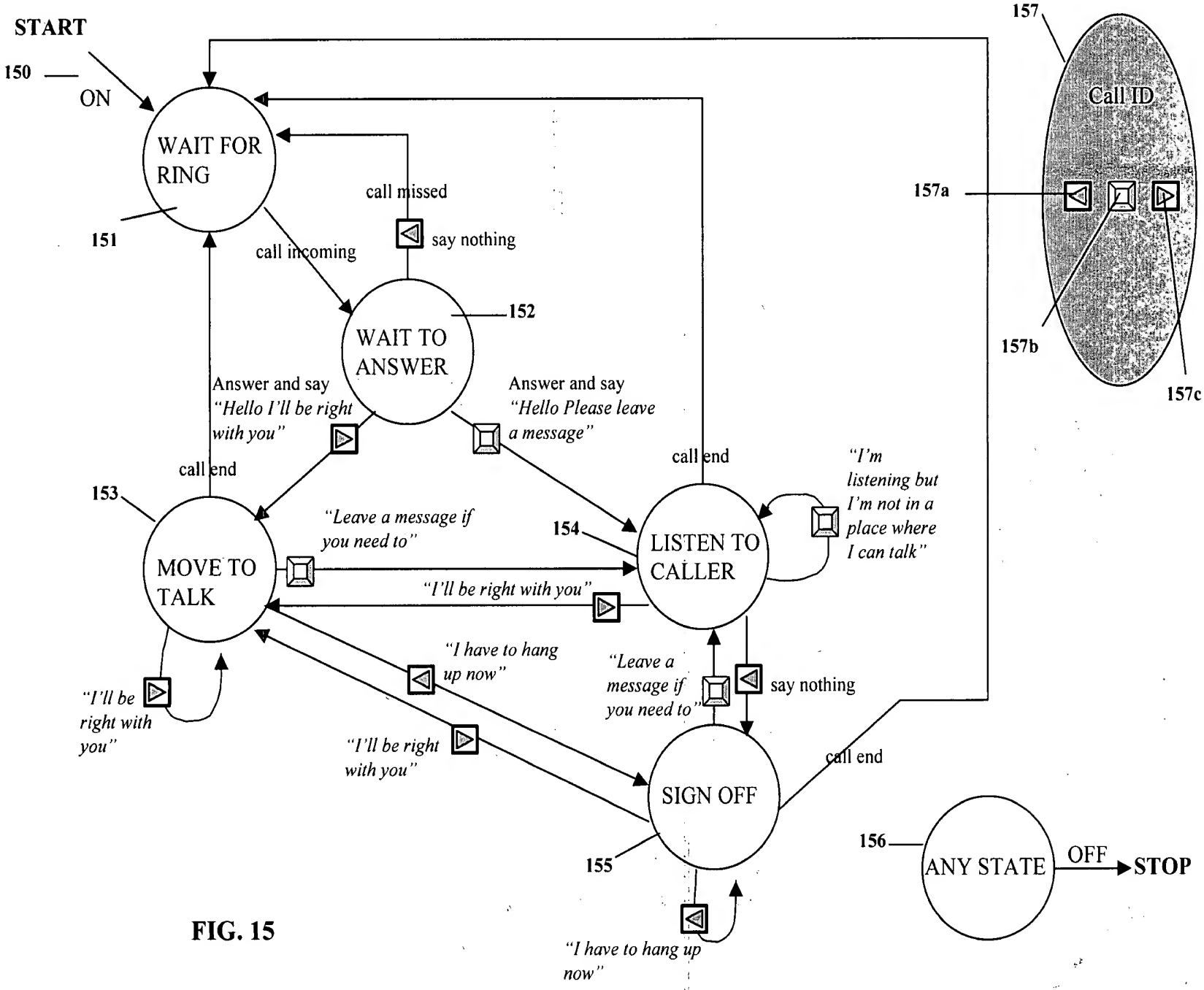

START
150
ON
WAIT FOR RING
151
call missed
say nothing
call incoming
WAIT TO ANSWER
152
Answer and say "Hello I'll be right with you"
Answer and say "Hello Please leave a message"
call end
153
MOVE TO TALK
"Leave a message if you need to"
154
LISTEN TO CALLER
call end
"I'm listening but I'm not in a place where I can talk"
"I'll be right with you"
"I'll be right with you"
"I have to hang up now"
"Leave a message if you need to"
say nothing
"I'll be right with you"
SIGN OFF
call end
155
"I have to hang up now"
157
Call ID
157a
157b
157c
156
ANY STATE
OFF
STOP

FIG. 15

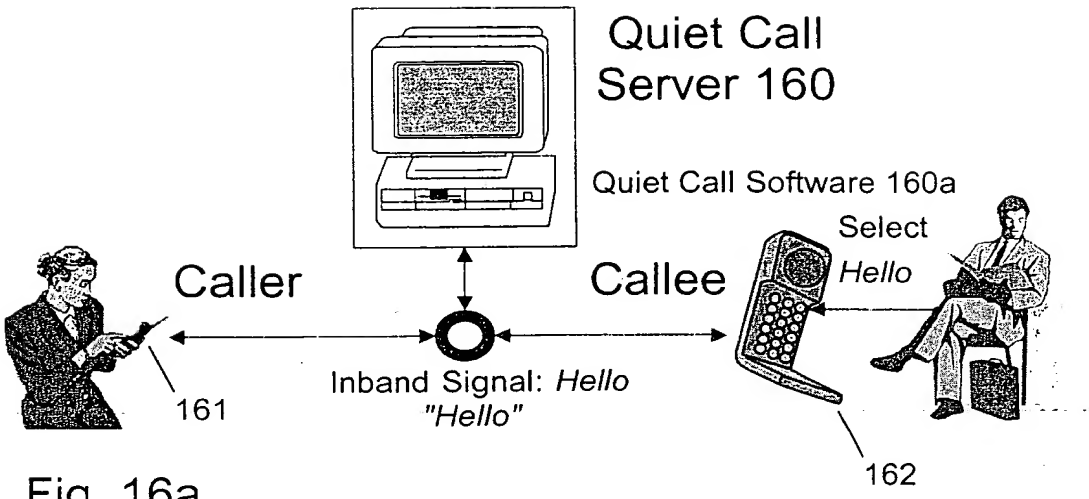


Fig. 16a

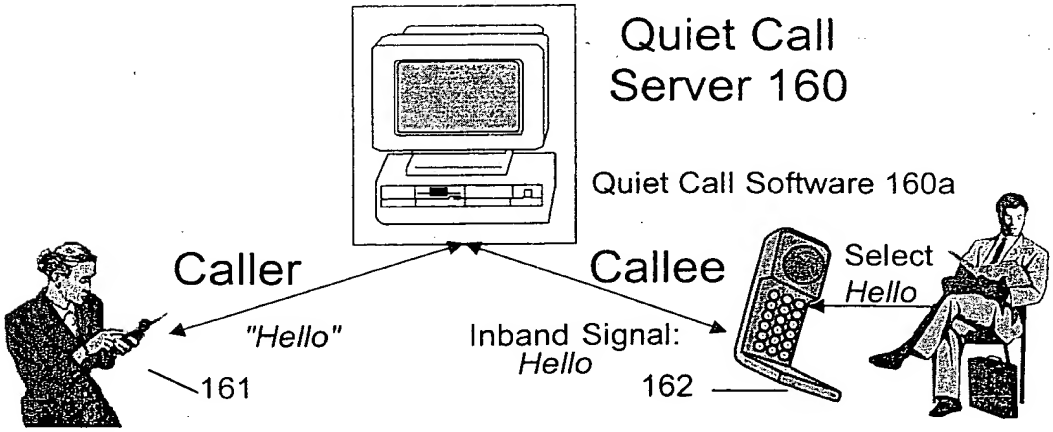


Fig. 16b

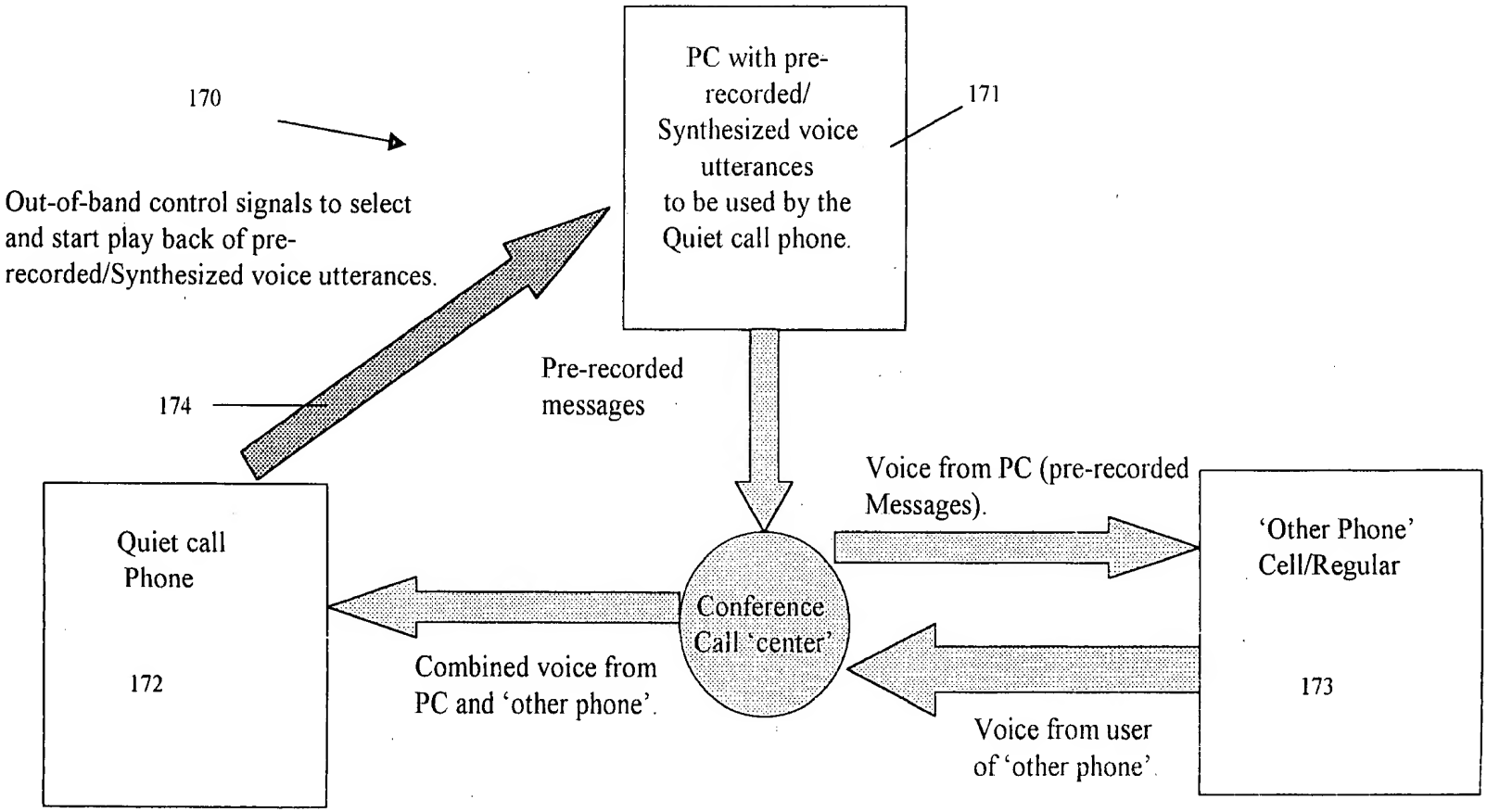

170
PC with pre-recorded/ Synthesized voice utterances to be used by the Quiet call phone.
171
Out-of-band control signals to select and start play back of pre-recorded/Synthesized voice utterances.
174
Pre-recorded messages
Voice from PC (pre-recorded Messages).
Quiet call Phone
172
Conference Call 'center'
'Other Phone' Cell/Regular
173
Combined voice from PC and 'other phone'.
Voice from user of 'other phone'.

Fig. 17

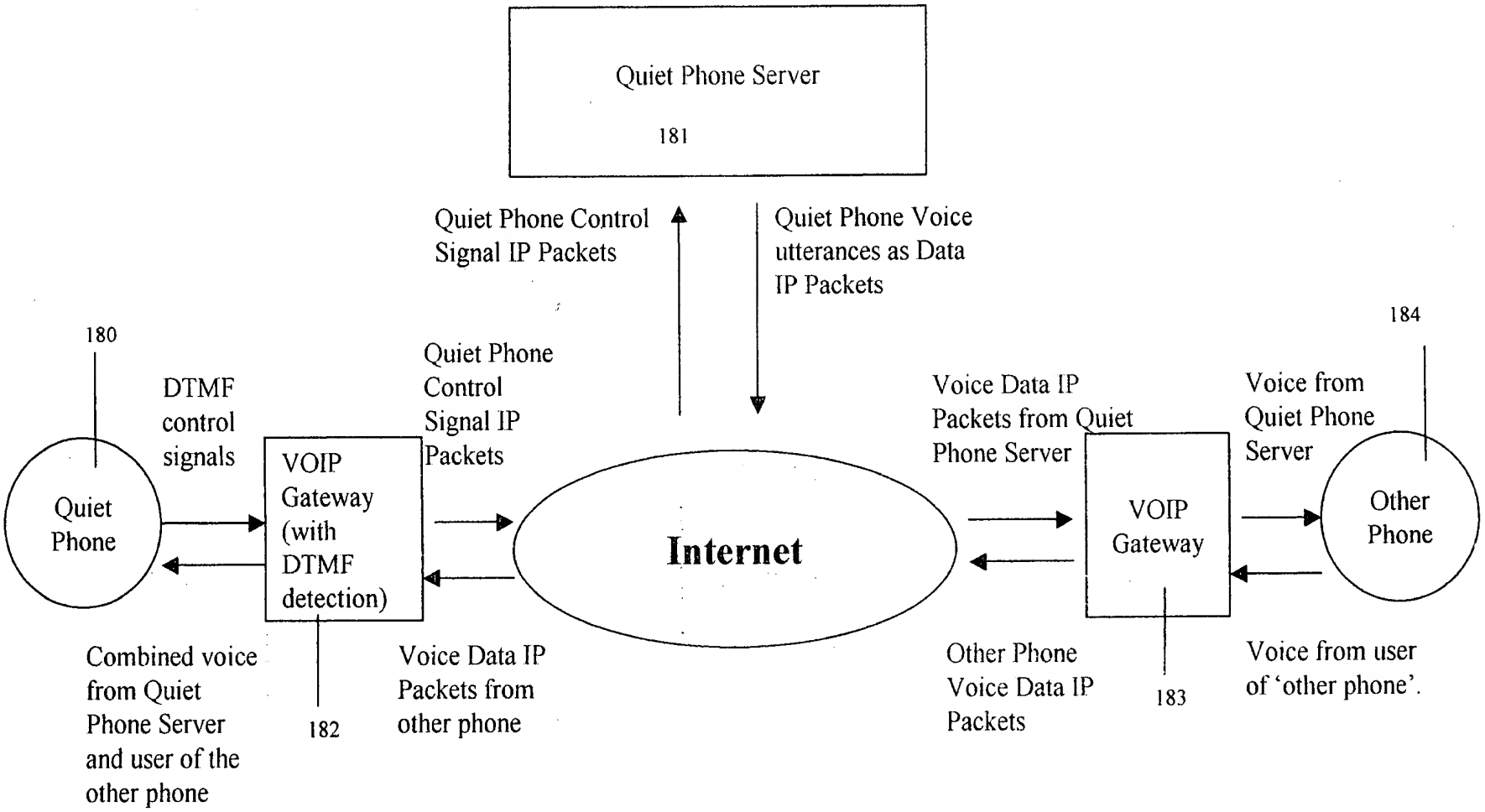

Quiet Phone Server
181
Quiet Phone Control Signal IP Packets
Quiet Phone Voice utterances as Data IP Packets
180
184
DTMF control signals
Quiet Phone Control Signal IP Packets
Voice Data IP Packets from Quiet Phone Server
Voice from Quiet Phone Server
Quiet Phone
VOIP Gateway (with DTMF detection)
Internet
VOIP Gateway
Other Phone
Combined voice from Quiet Phone Server and user of the other phone
182
Voice Data IP Packets from other phone
Other Phone Voice Data IP Packets
183
Voice from user of 'other phone'.

Fig. 18 a

D09060 "3T99S9G0

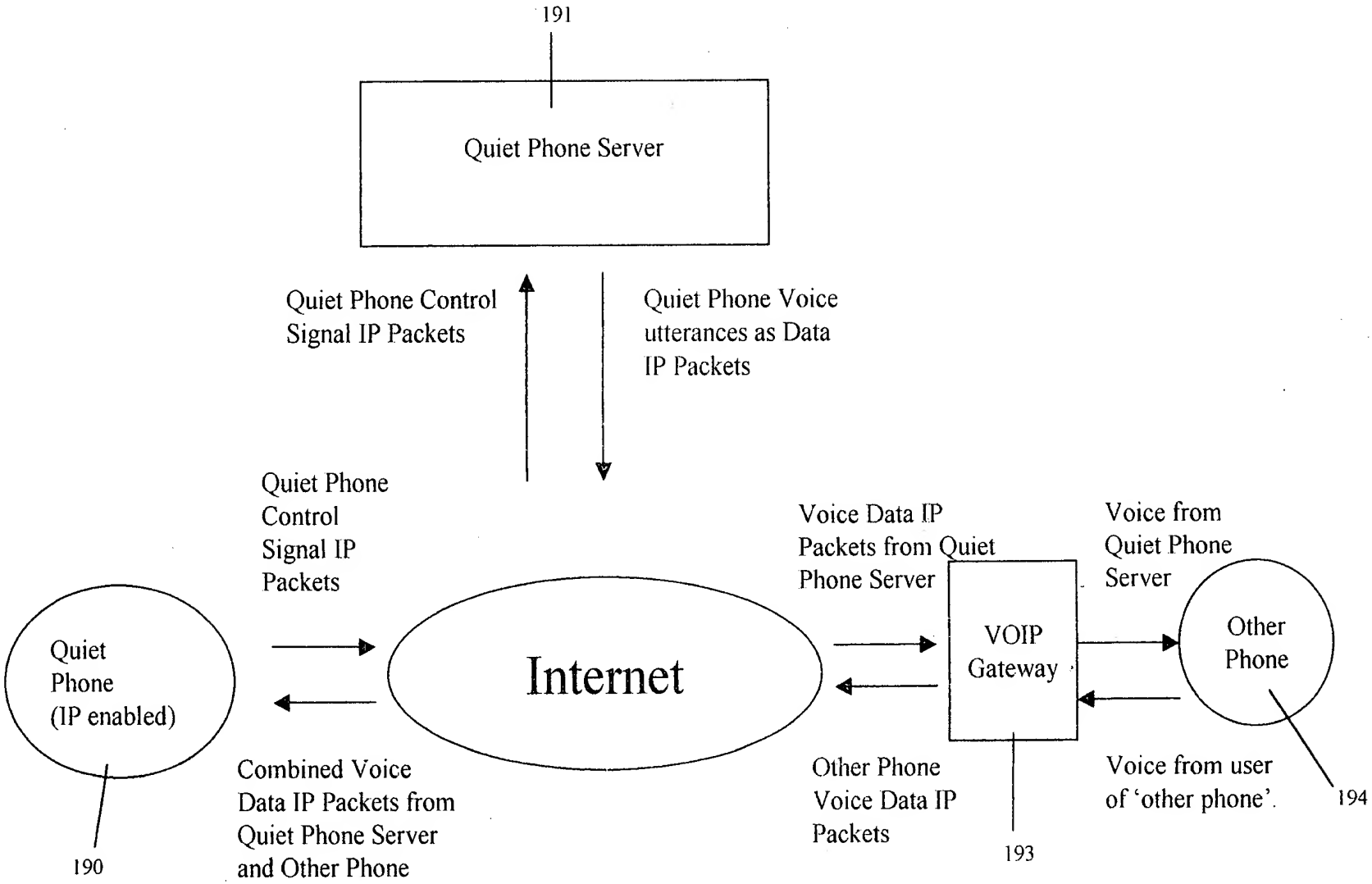


Fig. 18 b

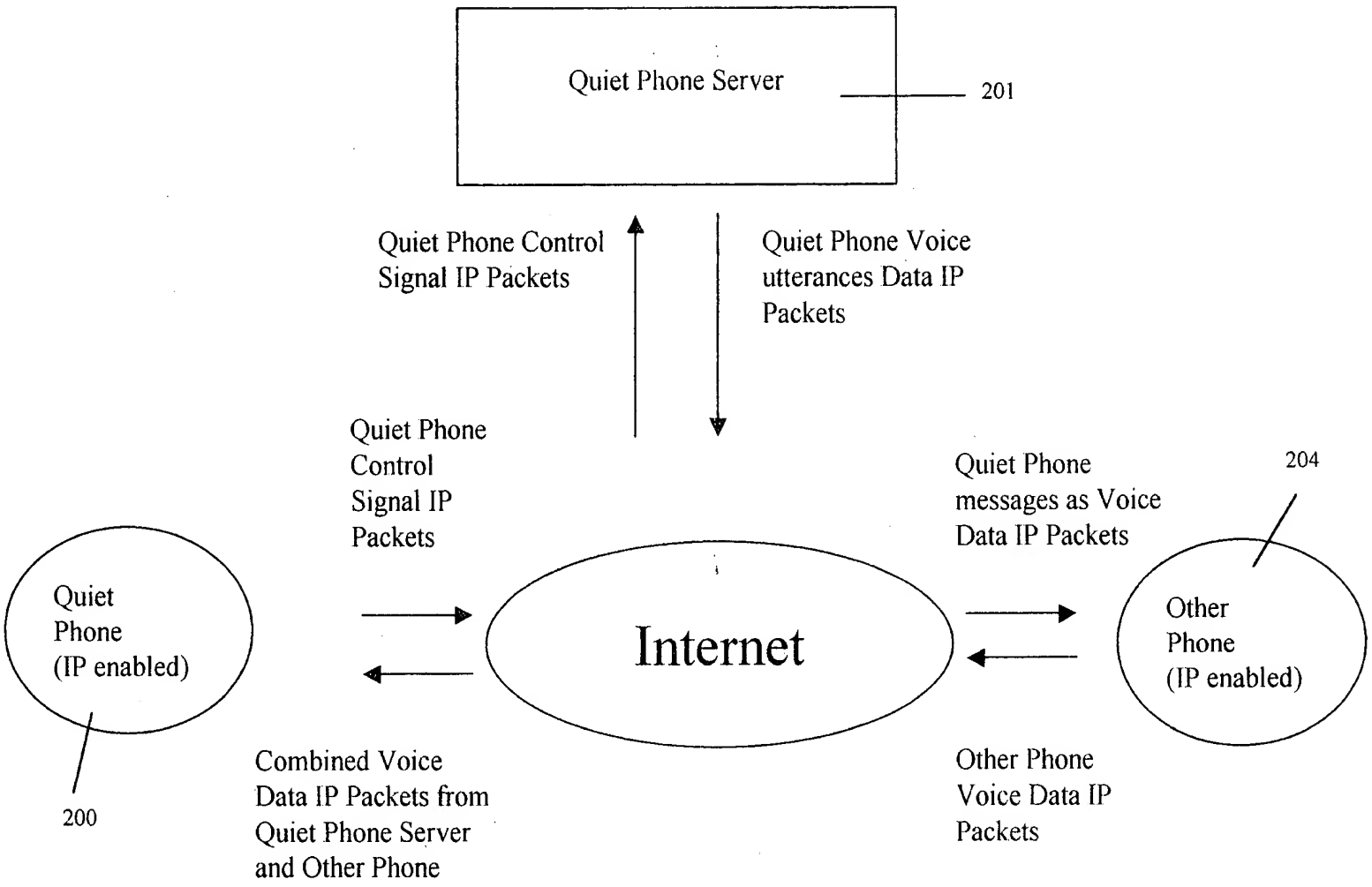

Quiet Phone Server
201
Quiet Phone Control Signal IP Packets
Quiet Phone Voice utterances Data IP Packets
Quiet Phone Control Signal IP Packets
Quiet Phone messages as Voice Data IP Packets
204
Quiet Phone (IP enabled)
Internet
Other Phone (IP enabled)
200
Combined Voice Data IP Packets from Quiet Phone Server and Other Phone
Other Phone Voice Data IP Packets

Fig. 18 c

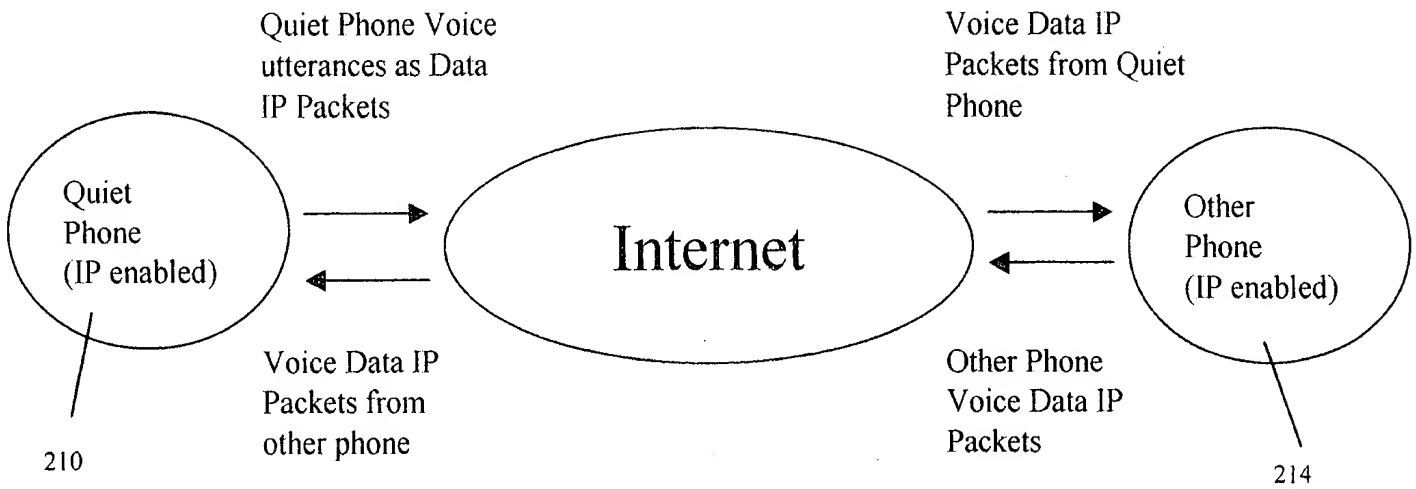

Quiet Phone Voice utterances as Data IP Packets
Voice Data IP Packets from Quiet Phone
Quiet Phone (IP enabled)
Internet
Other Phone (IP enabled)
Voice Data IP Packets from other phone
Other Phone Voice Data IP Packets
210
214

Fig. 18 d

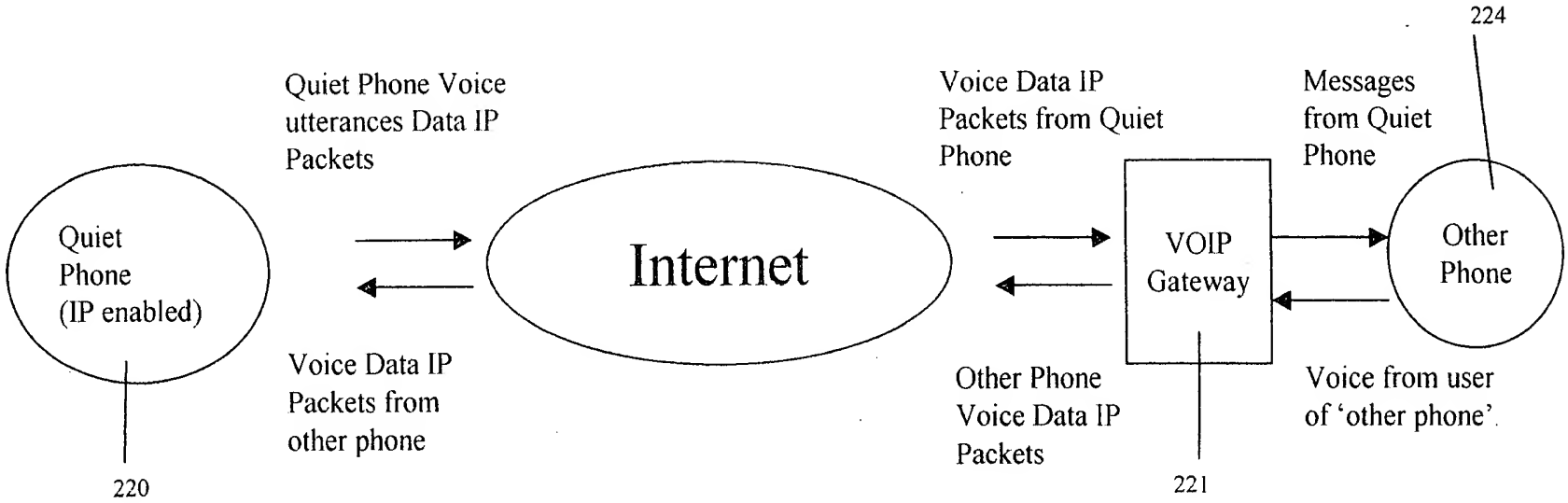

Quiet Phone Voice utterances Data IP Packets
Quiet Phone (IP enabled)
Internet
Voice Data IP Packets from other phone
220
Voice Data IP Packets from Quiet Phone
VOIP Gateway
Other Phone Voice Data IP Packets
221
Messages from Quiet Phone
224
Other Phone
Voice from user of 'other phone'.

Fig. 18 e